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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/851,885 | 05/09/2001 | Yasushi Kubota | 70904-55845 | 4328 |

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| EXAMINER | |
|---|---|
| KOVALICK, VINCENT E | |
| **ART UNIT** | **PAPER NUMBER** |
| 2673 | |

DATE MAILED: 12/15/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/851,885 | KUBOTA ET AL. | |
| | Examiner | Art Unit | |
| | Vincent E Kovalick | 2673 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *25 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,9,11,14* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Response to Election of Restriction*

1. This Office Action is in response to Applicant's Response to Election of Restriction dated September 25, 2003 in response to USPTO Office Action dated August 21, 2003.

In said response, Applicant selected Group 1, Species 5, identifying claims 1-13 to be examined. In that Group 1 does not provide for claims 2-13, Applicant's Attorney Mr. David Conlin, Reg. No. 27,026, conferred with his client and agreed that Applicant should have selected Group 4 and Species 5.

Mr. Conlin, in a telecon on December 4, 2003 asked for the group selection to be changed from group 1 to group 4 and will submit a follow-up fax so stating.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. (USP 5,973,661).

Relative to claim 1, Kobayashi et al. **teaches** an image display device utilizing a liquid crystal panel (col. 3, lines 6-67 and col. 4, lines 1-5); Kobayashi et al. further **teaches** an image display device (col. 1, line 13 and col. 4, lines 56-57), comprising: a pixel array constituted by a plurality of pixels for displaying an image (col. 1, lines 18-21; col. 4, lines 56-57 and col. 12, lines 27-29); a data signal line drive circuit for supplying a video signal to the pixel array (col. 1, lines 16-18 and col. 4, lines 58-59); a scan signal line drive circuit for controlling writing of the video signal to the plurality of pixels (col. 1, lines 16-18 and col. 4, lines 58-61); a timing circuit for supplying a timing signal to the data signal line drive circuit and the scan signal line drive circuit (col. 1, lines 11-16 and col. 4 lines 57); and a video signal processing circuit for supplying the video signal to the data signal line drive circuit (col. 1, lines 11-16, col. 4, lines 58 and 61-64); wherein a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in a plurality so a to realize mutually different display configurations (col. 1, lines 16-18; col. 4, lines 58-61 and Fig. 1).

Regarding claim 2, Kobayashi et al. **teaches** said image display device wherein only one of the parts and entireties of the drive circuit(s) operates at any given time (col. 5, lines 9-15).

As to claim 3, Kobayashi et al. **teaches** said image display device wherein: the same part(s) and entirety (ies) of the dive circuit(s) is (are) driven throughout one or more fame periods (col. 1, lines 39-44).

Relative to claim 4, Kobayashi et al. **teaches** said image display device wherein: two or more of the parts and entireties of the drive circuit(s) are switchably driven in one frame period (col. 1, lines39-44).

Regarding claim 5, Kobayashi et al. **teaches** said image display device wherein: at least two of the parts and entireties of the drive circuit(s) write image data in respective areas on a screen (col. 1, lines 39-50).

As to claim 6, Kobayashi et al. **teaches** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least two of the parts and entireties of the data signal line drive circuit write image data in one partial or whole area on a screen in one frame period (col. 1, lines 39-50).

Relative to claim 7, Kobayashi et al. **teaches** said image display device wherein: the at least two of the parts and entireties of the data signal line dive circuit operate simultaneously (col. 1, lines 39-50).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 6 in item 3 hereinabove, and further in view of Tsuchida et al. (USP 6,232,938).

Relative to claim 8, Kobayashi et al. **does not teach** said image display device wherein: at least one of the parts and entireties of the data signal line drive circuit writes image data overlapping an image written by another part or entirety of the data signal line drive circuit in one frame period.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Tsuchida et al. **teaches** said image display device wherein: at least one of the parts and entireties of the data signal line drive circuit writes image data overlapping an image written by another part or entirety of the data signal line drive circuit in one frame period (col. 3, lines 1-13).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Tsuchida et al. in order to provide an LCD having high displaying quality and low power consumption; and, means to reduce the power consumption of an active matrix LCD having the structure of a plurality of liquid crystal layers such as a tri-layer LCD without a deterioration of the displaying quality (col. 2, lines 57-64, Tsuchida et al.).

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. taken with Tsuchida et al. as applied to claim 8 in item 5 hereinabove, and further in view of Kanno et al. (USP 5,898,417).

Regarding claims 9 and 10, Kobayashi et al. taken with Tsuchida et al. **does not teach** said image display device wherein at least one of the parts and entireties of the data signal line drive circuit writes an image overlapping another image throughout one or more entire horizontal scan periods.

Kobayashi et al. taken with Tsuchida et al. teaches an image display device utilizing a liquid crystal panel having a high display quality with low power consumption.

Kanno et al. **teaches** a display apparatus and driving circuit (col. 3, lines 29-45); Kanno et al. further **teaches teach** said image display device wherein at least one of the parts and entireties of the data signal line drive circuit writes an image overlapping another image throughout one or more; or only in a part of one or more, entire horizontal scan periods (col. 8, lines 40-46).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. taken with Tsuchida et al. the feature as taught by Kanno et al. in order to put in place the means to facilitate a display panel in which a moving image can be displayed at a high speed upon cursor or mouse movement in the scan driving at a low frame frequency of 30 Hz or lower (col. 3, lines 33-37, Kanno et al.)

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 6 in item 3 hereinabove, and further in view of Taguchi et al. (USP 6,181,317).

Relative to claim 11, Kobayashi et al. **does not teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data in a blanking period of each horizontal scan period.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Taguchi et al. **teaches** a display and method of and drive circuit for driving the display

(col. 1, lines 38-67 and col. 2, lines 1-61); Taguchi et al. further **teaches** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data in a blanking period of each horizontal scan period (col.19, lines 13-25).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Taguchi et al. in order to provide a display capable of properly displaying images of various sizes (col. 1, lines 39-40, Taguchi et al.)

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 6 in item 3 hereinabove, and further in view of Sokawa et al. (USP 6,353,460).

Regarding claim 12, Kobayashi et al. **does not teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image data with a predetermined delay from another part or entirety of the data signal line drive circuit.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Sokawa et al. **teaches** a video signal processing device (col. 4, lines 37-67 and col. 5, lines 1, 35); Sokawa et al. further **teaches teach** said image display device wherein a part or entirety of the data signal line drive circuit is provided in plurality; and at least one of the parts and entireties of the data signal line drive circuit writes image

data with a predetermined delay from another part or entirety of the data signal line drive circuit (col. 8, lines 13-23).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Sokawa et al. in order to put in place the means to facilitate receiving a variety of video signals from such diversified sources an in turn displaying the corresponding images.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to claim 1 in item 3 hereinabove, and further in view of Imamura (USP 6,232,949).

Regarding claim 13, Kobayashi et al. **does not teach** said image display device wherein the parts and entireties of the drive circuit(s) are located opposing one another across the pixel array.

Kobayashi et al. teaches an image display device utilizing a liquid crystal panel.

Imamura **teaches** a passive matrix LCD with drive circuits at both ends of the scan electrode applying equal amplitude voltage waveforms simultaneously to each end (col. 2, lines 6-41); Imamura further **teaches** said image display device wherein the parts and entireties of the drive circuit(s) are located opposing one another across the pixel array (Fig. 1, items 5 and 8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kobayashi et al. the feature as taught by Imamura in order to provide an improved flat display device which substantially reduces contrast problems; and further provides a flat display device which applies a voltage to both scanning driving circuits to prevent current from flowing across the liquid crystal

(col. 2, lines 24-30, Imamura).

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | | |
|---|---|---|
| U. S. Patent No. | 6,340,959 | Inamori |
| U. S. Patent No. | 6,335,778 | Kubota et al. |

***Responses***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.

Vincent E. Kovalick

December 9, 2003

BIPIN SHALWALA
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